

Transport Infrastructure Works

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KEY POINTS

- Benefits of Good Transport Infrastructure
- Completing the Network
- Capital Investment Programme
- City Solutions

Efficient transport networks are essential enablers for economic growth in successful economies.

The main role of transport infrastructure, for any country, is to facilitate connections between spatially divided industries , services and populations.

THE BIGGER PICTURE

TRANSPORT INFRASTRUCTURE AND ECONOMIES

Does transport investment contribute to economic growth?

International evidence would suggest so - the vast majority of economic studies in this area in recent years found a positive relationship.

Returns can be very high especially when bottlenecks are relieved even in developed networks as is the case in Ireland.

Furthermore, in the context of our current and future transport networks, rigorous individual project appraisal and project selection processes will assist in ensuring productive investments in transport infrastructure.

THE BENEFITS OF TRANSPORT INVESTMENT

2006
Eddington Study
on benefits of
transport investment
for UK government

Increases business efficiency

Increases business investment and innovation

Supports clusters and **agglomerations** of economic activity

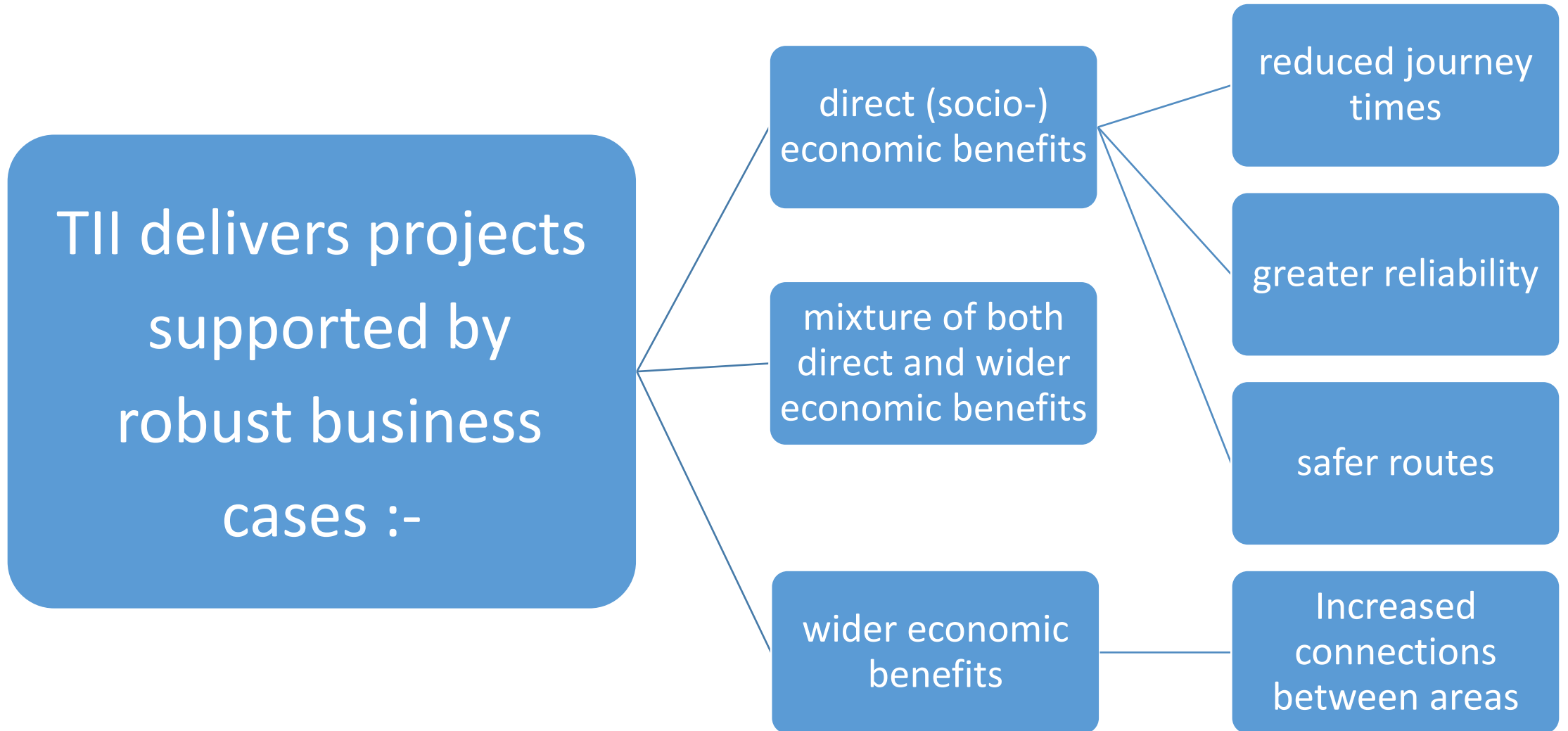
Improves the efficient functioning of labour markets

Increases competition through access to new markets

Triggers growth stimulating further growth

Provides attractive business environment and good quality of life

BUSINESS CASE FOR PROJECTS



CASE STUDIES: IMPACT OF TII PROJECTS

Ex-Post Cost-Benefit Analysis

LUAS System in Dublin

Cost-Benefit ratio of 2.96

€991 million Cost - €2.9 billion Benefit

M4/M6 Motorway Corridor

(a collection of five individual projects)

Cost-Benefit ratio of 1.56

€1.6 billion Cost - €2.6 billion Benefit

Interviews with Stakeholders

Indirect Impacts

On balance more positive
than negative

M4/M6 MOTORWAY CORRIDOR WIDER IMPACTS

STAKE HOLDER	COMMENT
<i>South Dublin Chamber of Commerce</i>	<ul style="list-style-type: none">• Improved economic efficiency - Business serving country can consolidate operations in one location rather than running multiple bases nationwide
<i>Ireland West Airport, Knock</i>	<ul style="list-style-type: none">• Increase in business for Dublin and Knock airports but contributed to closure of Galway Airport
<i>Western Development Commission</i>	<ul style="list-style-type: none">• Peripheral regions without improved transport links – felt M4/M6 reinforced relative disadvantage
<i>IBEC</i>	<ul style="list-style-type: none">• M4/M6 allowed improved collaboration between business in different cities and led to deeper labour markets available to those cities
<i>IDA</i>	<ul style="list-style-type: none">• Such motorway links are an essential factor to attract investors to a location

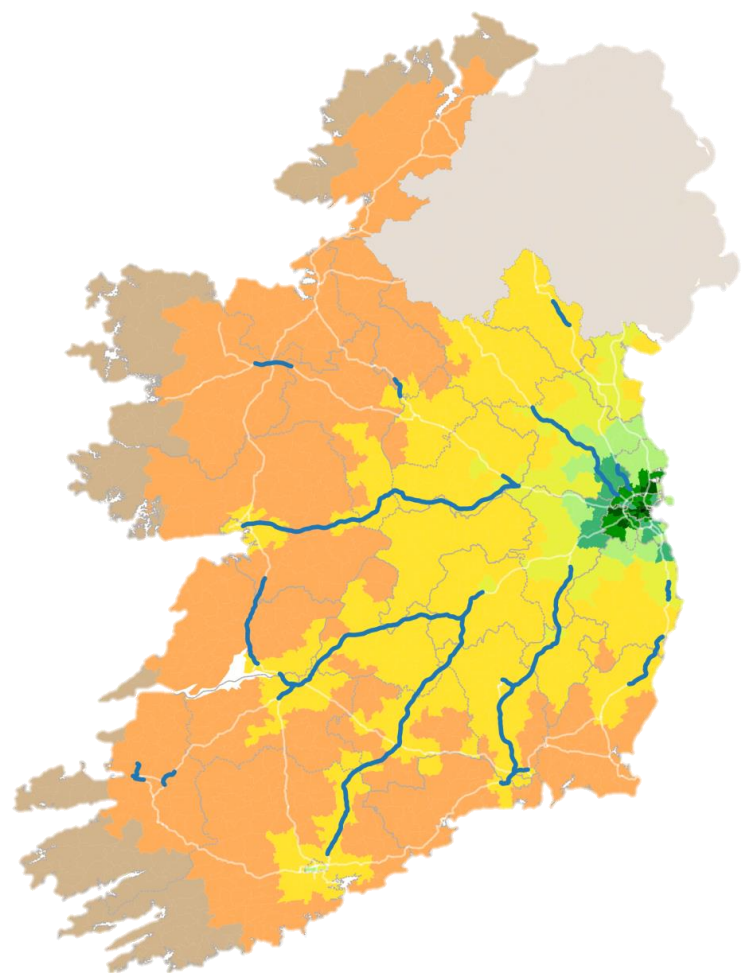
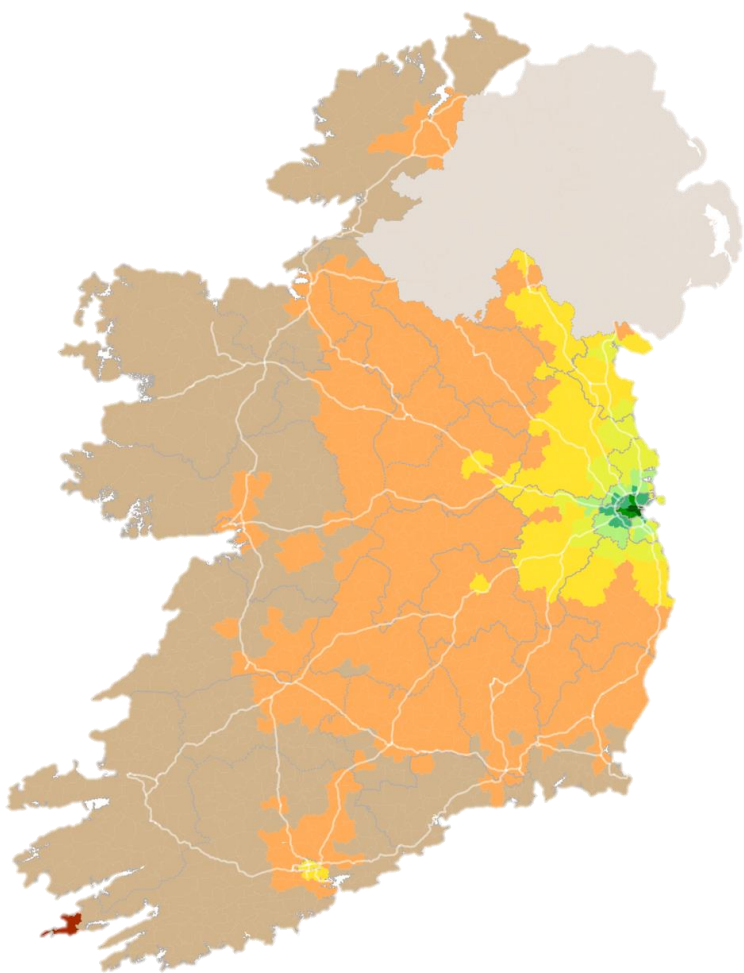
LUAS LIGHT RAIL NETWORK WIDER IMPACTS

STAKE HOLDER	COMMENT
<i>South Dublin Chamber of Commerce</i>	<ul style="list-style-type: none">• Very valuable social role played by the Red LUAS in connecting residents in its catchment area with hospitals, schools, colleges and cultural facilities• Allowed enhanced labour mobility. Sandyford now hosts a large, mature cluster of information technology firms
<i>Tallaght Hospital</i>	<ul style="list-style-type: none">• LUAS availability makes staff recruitment easier. Facilitates Tallaght Hospital working in close co-operation with St. James's hospital, with many key staff working in both locations
<i>Fáilte Ireland</i>	<ul style="list-style-type: none">• LUAS improves the attractiveness of Dublin for visitors by providing a quick and simple way to travel to attractions outside the immediate city centre. "LUAS is superb...we could do with another 4 or 5 of them"

ACCESS TO EMPLOYMENT FOLLOWING COMPLETION MAJOR INTER-URBAN ROUTES

Access to Employment 2006

Access to Employment 2011



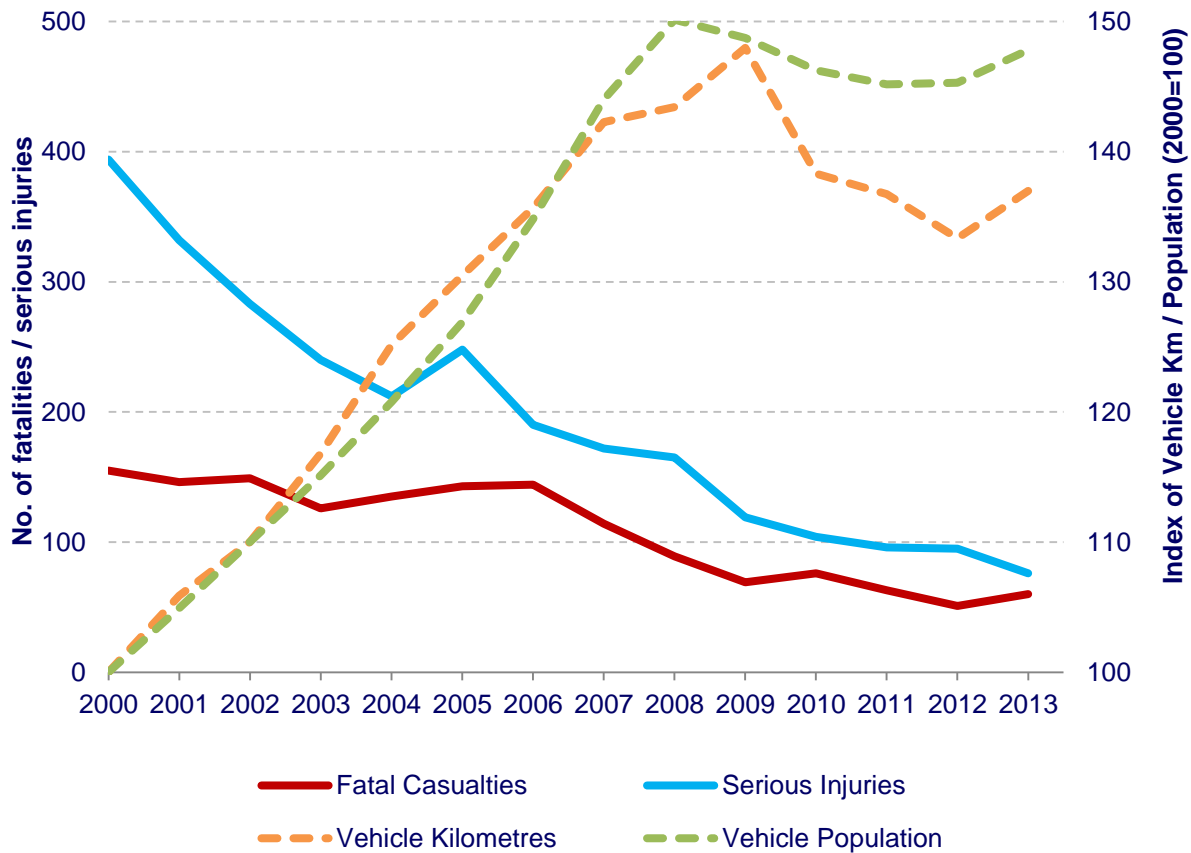
Note: Accessibility score is set against highest zone for employment i.e. Rotunda Ward in south Dublin City Centre

BENEFITS OF INVESTMENT ON THE MAJOR INTERURBAN ROUTES

Journey Time Savings

Routes	1999	2013	Minutes Saved
M50 - Border	79	48	30
M50 - Galway	157	104	50
M50 - Limerick	145	105	40
M50 - Cork	205	128	80
M50 - Waterford	125	86	40

Reduction in Fatal and Serious Collisions



Since 1999 the safety of the national road network has greatly improved

IRELAND'S NATIONAL ROAD ASSET

2,700 km of National Primary Roads

Linking main cities and towns

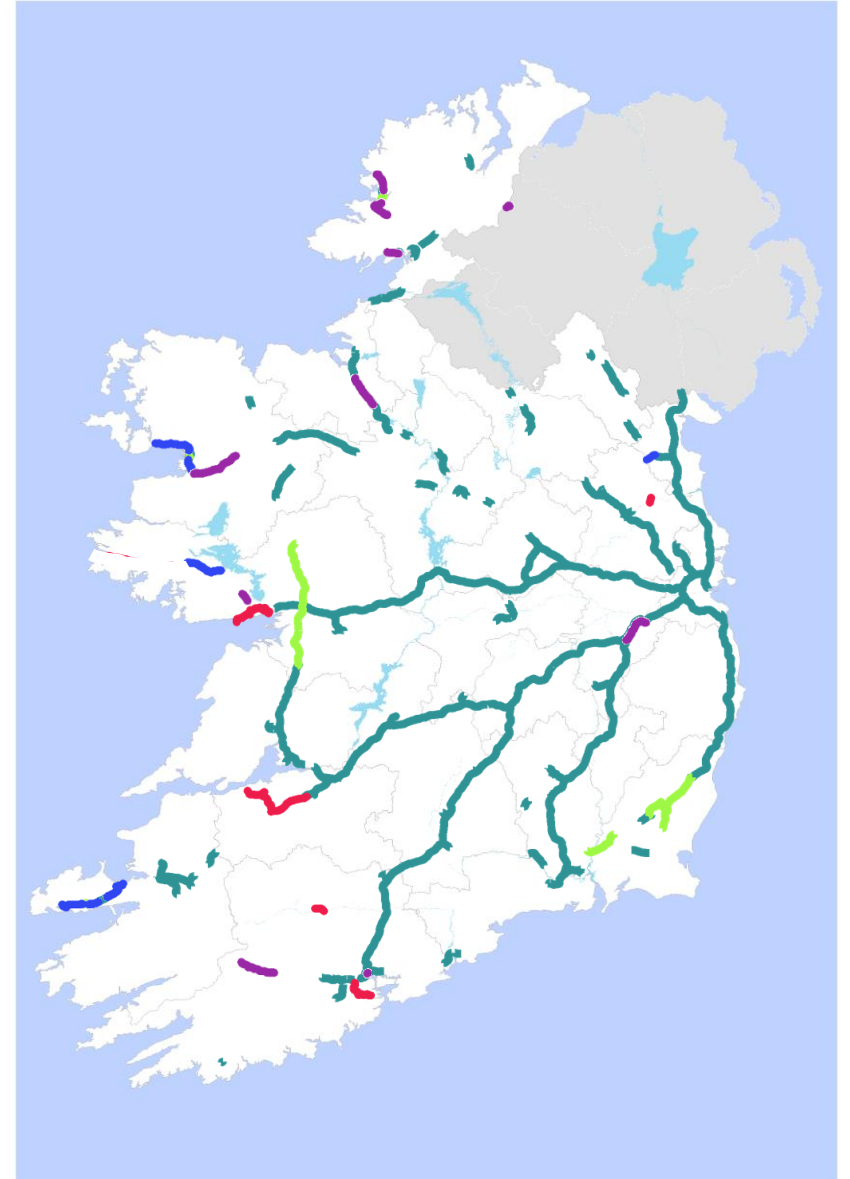
2,700 km of National Secondary Roads

Linking villages and townlands

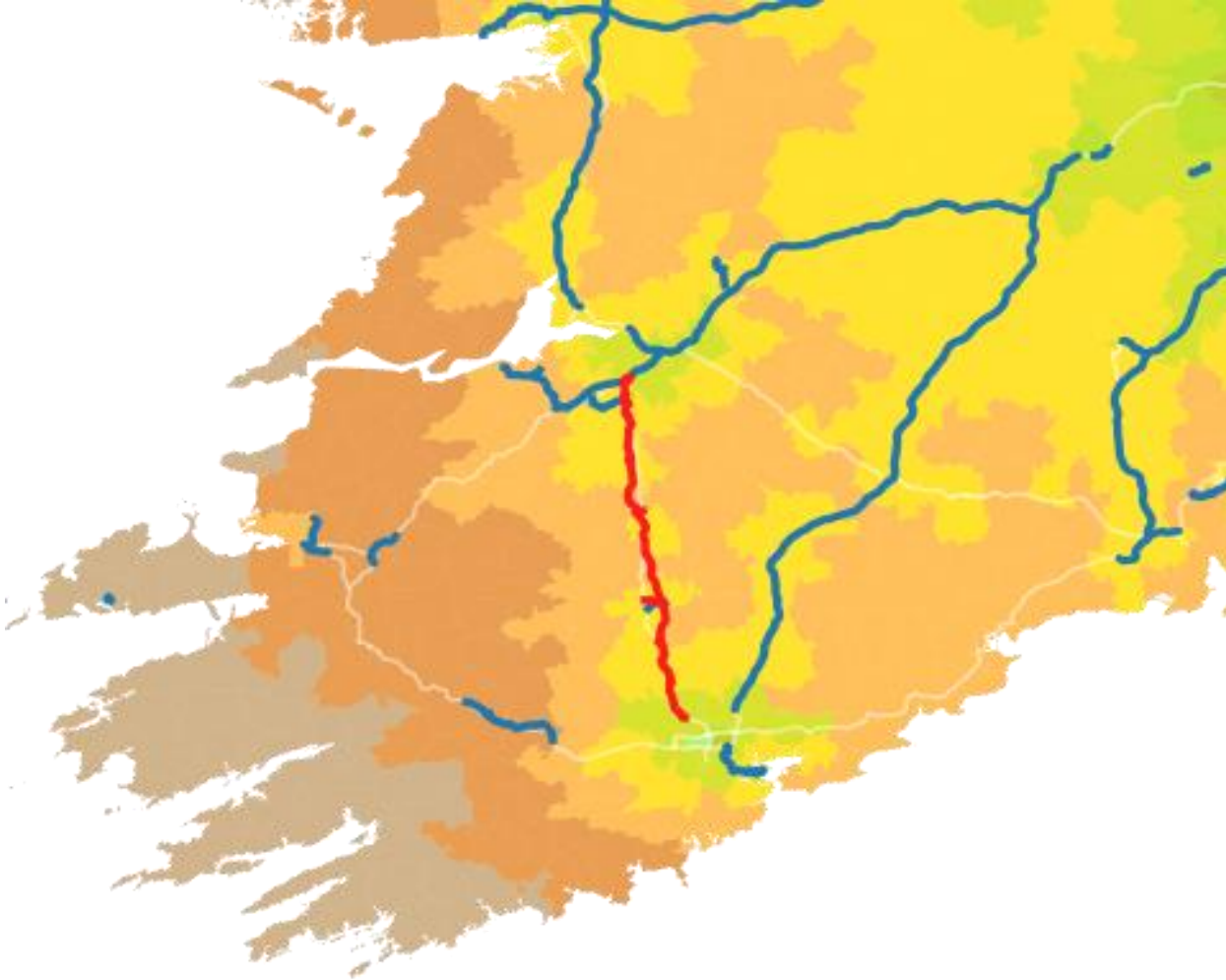


UNFINISHED BUSINESS?

- Completed Majors
- Under Construction
- With Planning but not on Capital Programme
- Progress to Construction with Planning Approval
- Subject to Planning Approval



FILLING INFRASTRUCTURAL GAPS

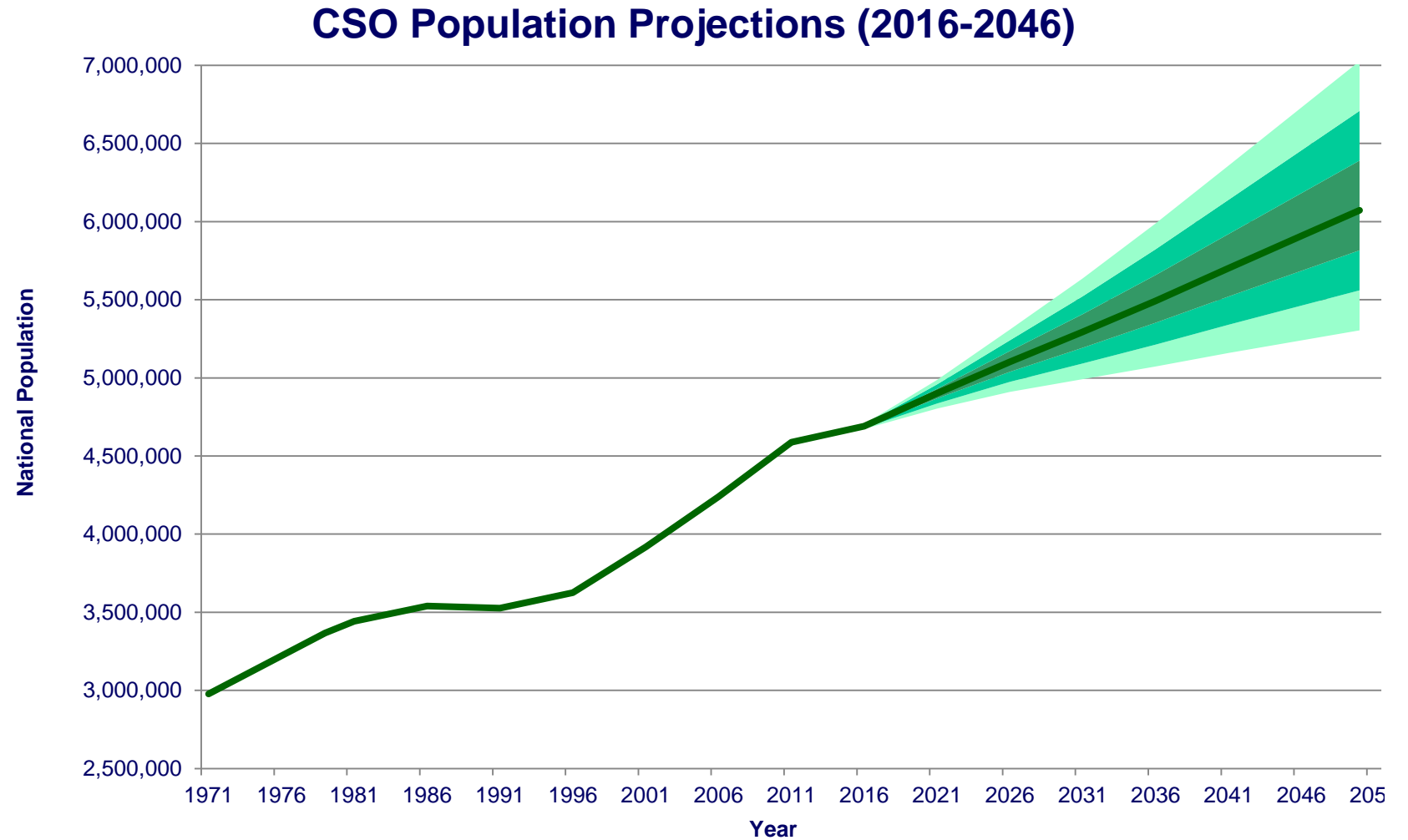


- The merits of agglomeration impacts are accepted
- Cork to Limerick corridor displays significant potential benefits due to agglomeration
- Impacts along corridor but also extend northwards towards Galway

POPULATION GROWTH

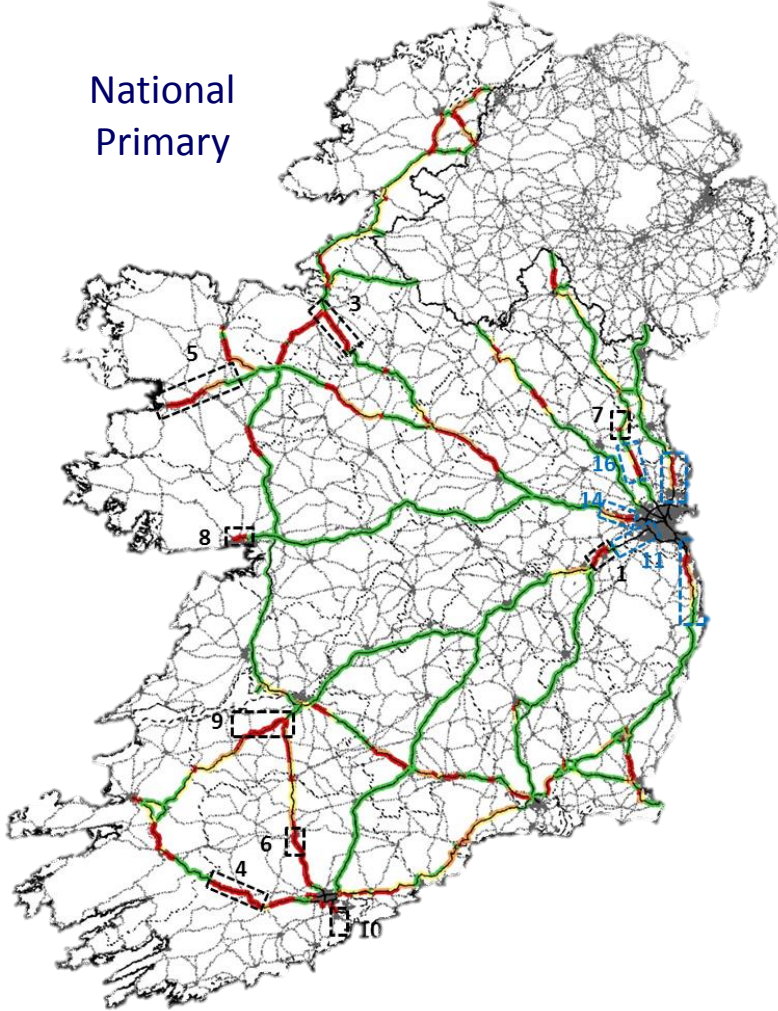
*The 2016 Census tells us
that the population of
Ireland is rising*

*The population is
forecasted to increase to
between 5.2m and 6.7m by
2046*



STATE OF THE NETWORK (2030)

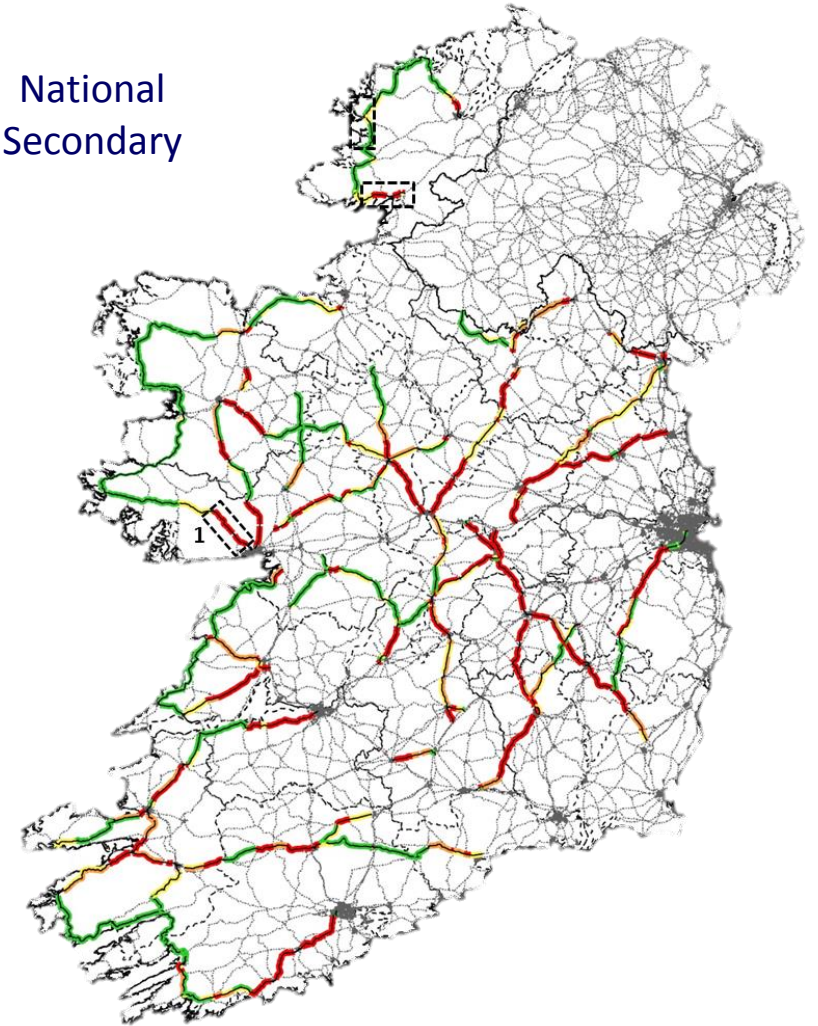
National
Primary



AADT Flows / NRA TD 9 LoS D Capacity

- ≤ 0.8
- 0.8 to 1
- 1.0 to 1.2
- > 1.2

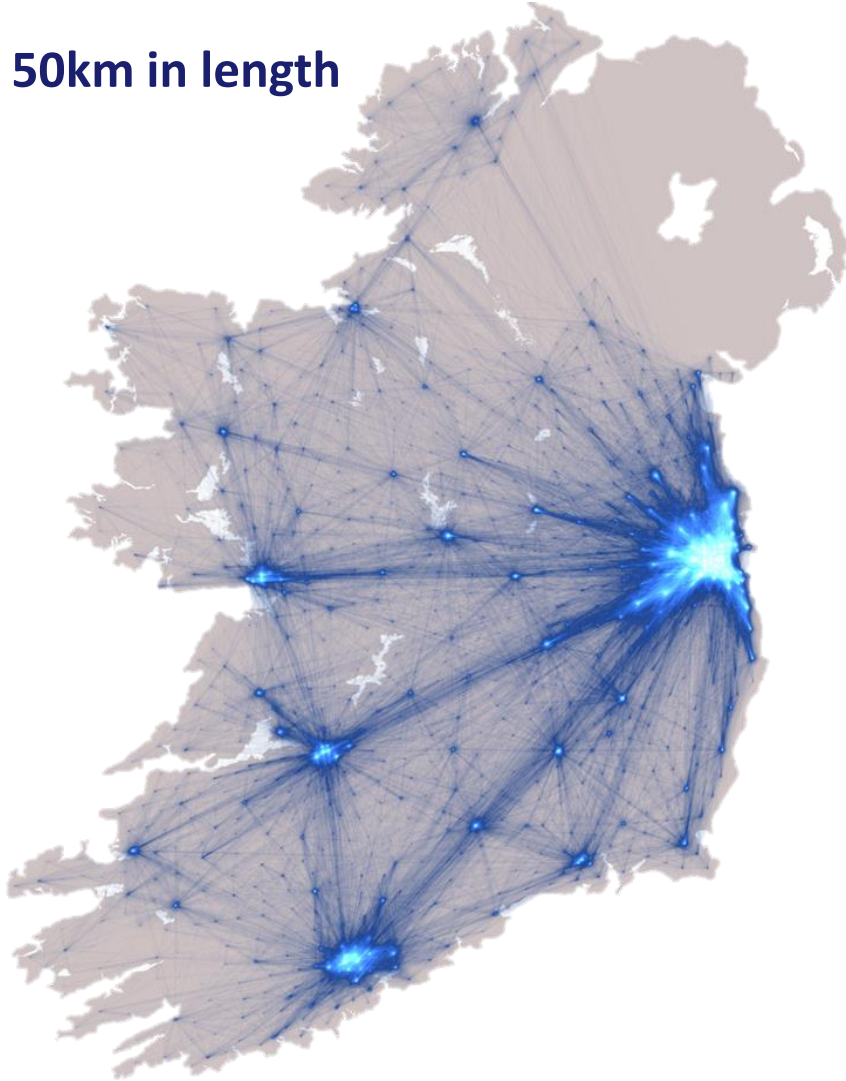
National
Secondary



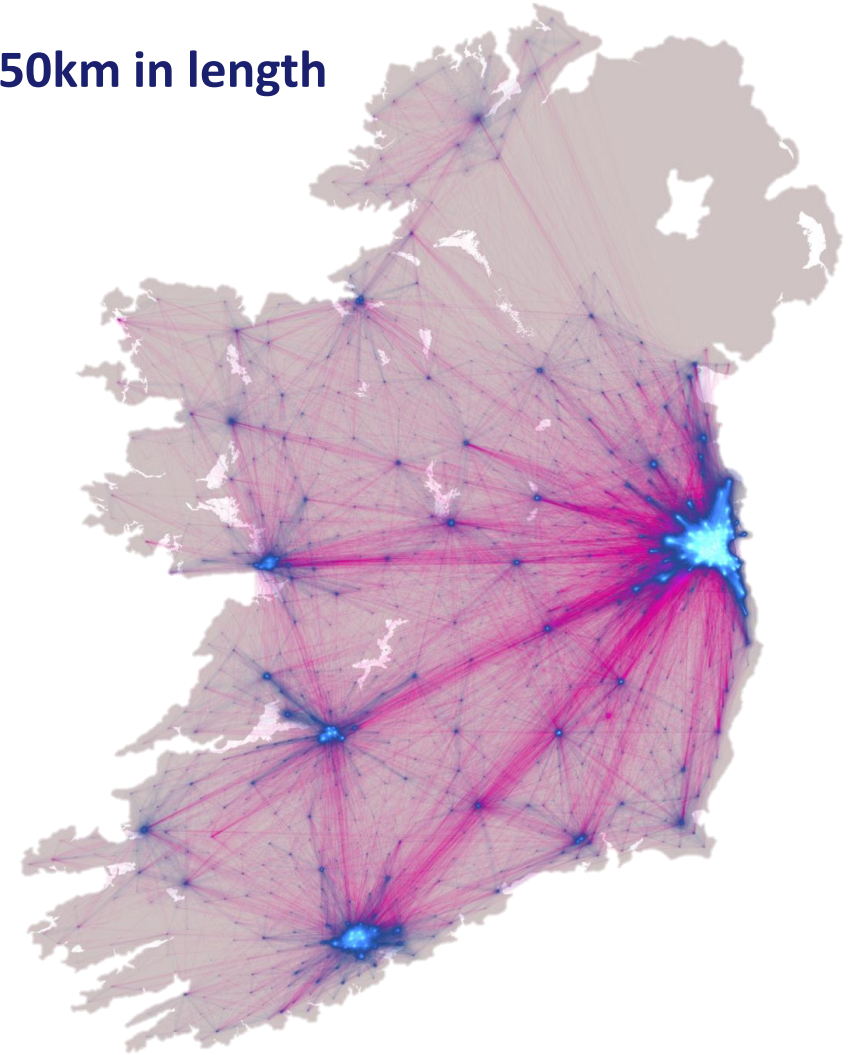
National Road Network requires investment due to natural growth in demand

VEHICLE KM TRAVELLED IN NATIONAL TRANSPORT MODEL

Trips < 50km in length



Trips > 50km in length



How is the
asset used?

TRANSPORT INFRASTRUCTURE INVESTMENT 2016-2021

Awaiting Planning	Approaching Contract Award	Under Construction
Metro North	N4 Collooney to Castlebaldwin	Luas Cross City
N6 Galway Bypass	N5 Westport to Turlough	
N2 Slane Bypass	M7 Naas Newbridge Upgrade	Gort to Tuam PPP
N20 Mallow Relief Road	N8/N25 Dunkettle	
N21/N69 Adare to Foynes	N22 Ballyvourney to Macroom	Gorey Enniscorthy PPP
N28 Cork to Ringaskiddy	N56 Dungloe to Glenties	
	N56 Mountcharles to Inver	New Ross By Pass
	N59 Moycullen Bypass	

ROLLOUT OF CAPITAL INVESTMENT PLAN SCHEMES

Scheme Name	Construction Start Date	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Post 2025
Schemes with Planning Approvals												
N7 Naas Newbridge Upgrade	Q2/17											
M8/N40/N25 Dunkettle	Q1/19											
N4 Collooney to Castlebaldwin	Q2/19											
N22 Ballyvourney to Macroom	Q1/20											
N5 Westport to Turlough	Q1/21											
N59 Moycullen Bypass	Q1/21											
N56 Mountcharles to Inver (Rolling Programme)	Q4/17											
N56 Dungloe to Glenties (Rolling Programme)	Q1/18											
Schemes to be progressed subject to Planning												
N20 Mallow Relief Road (incl. land)	Q1/21											
N2 Slane Bypass (incl. land)	Q4/21											
N6 Galway City Transport Project (incl. land)	Q2/22											
N21/N69 Adare to Foynes	Q3/22											
N28 Cork to Ringaskiddy	Q3/22											
KEY		Planning & Design	Advance Works	With An Bord Pleanala	Tender	Construction	Closeout					

M17/M18 GORT TO TUAM PPP



Typical Construction



Rathmorrissy Junction

RIVER BARROW BRIDGE CONSTRUCTION PROGRESS



N8/N25 DUNKETTLE INTERCHANGE UPGRADE



EXISTING N4 AT DRUMFIN - N4 COLLOONEY TO CASTLEBALDWIN

Existing

- *Sub-standard Single carriageway*
- *Variation in cross-section*
- *Narrow, poorly aligned road*
minor Junctions and accesses
- *No overtaking due to continuous*
centreline road markings (70% of
length)
- *Speed limit of 50kph through*
Castlebaldwin



N5 WESTPORT TO TURLOUGH (WITH CROAGH PATRICK AHEAD)



N56 DUNGLOE TO GLENTIES

A Lifeline Project ?



GALWAY TRANSPORT STRATEGY

Straitéis Iompair na Gaillimhe Galway Transport Strategy

An Integrated Transport Management Programme for Galway City and environs



Smarter Mobility



Public Transport



CITY SOLUTIONS

Public Transport

- High Capacity
- Efficient
- Reliable

BRT



Light Rail



Commuter Trains

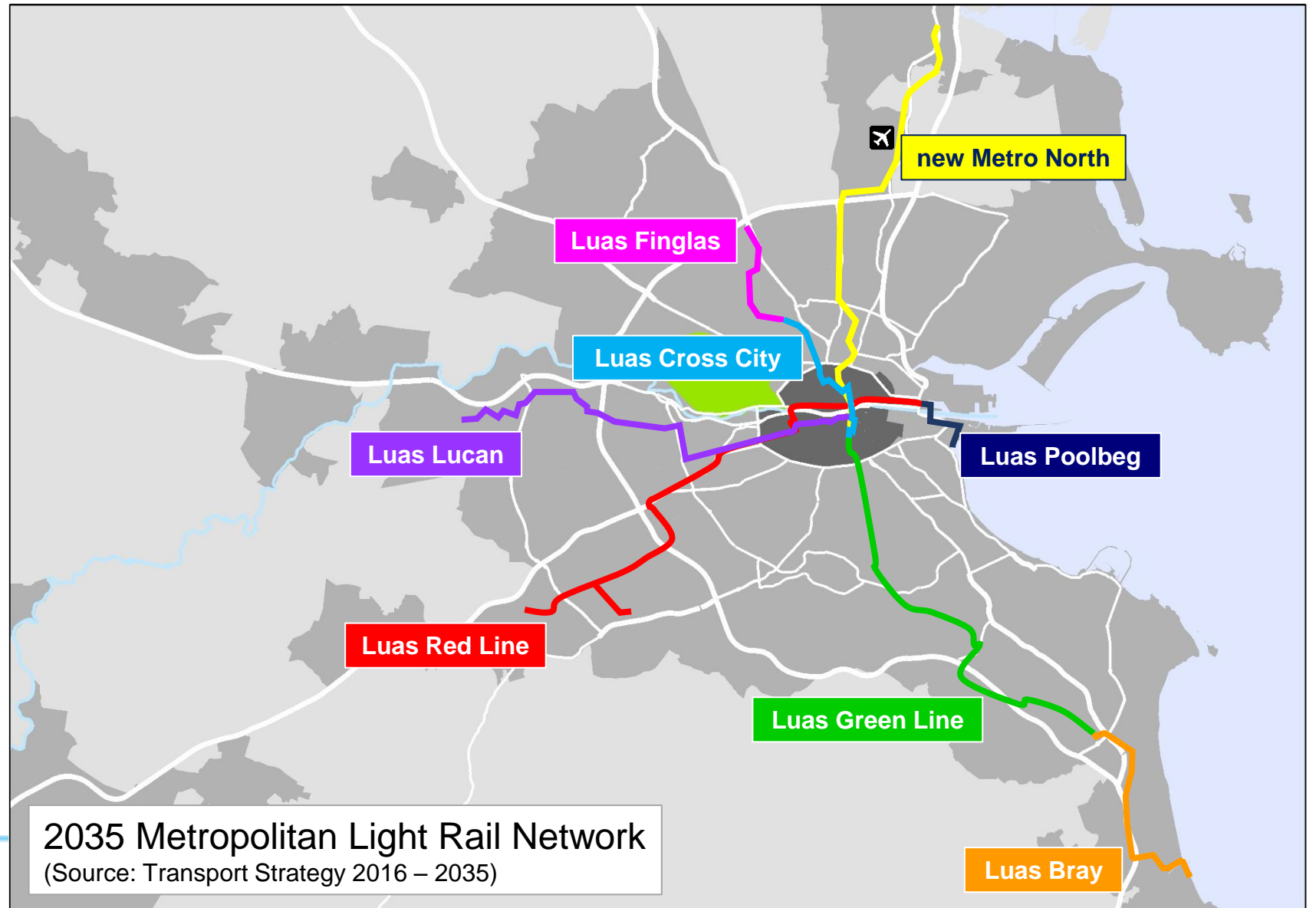


Metro

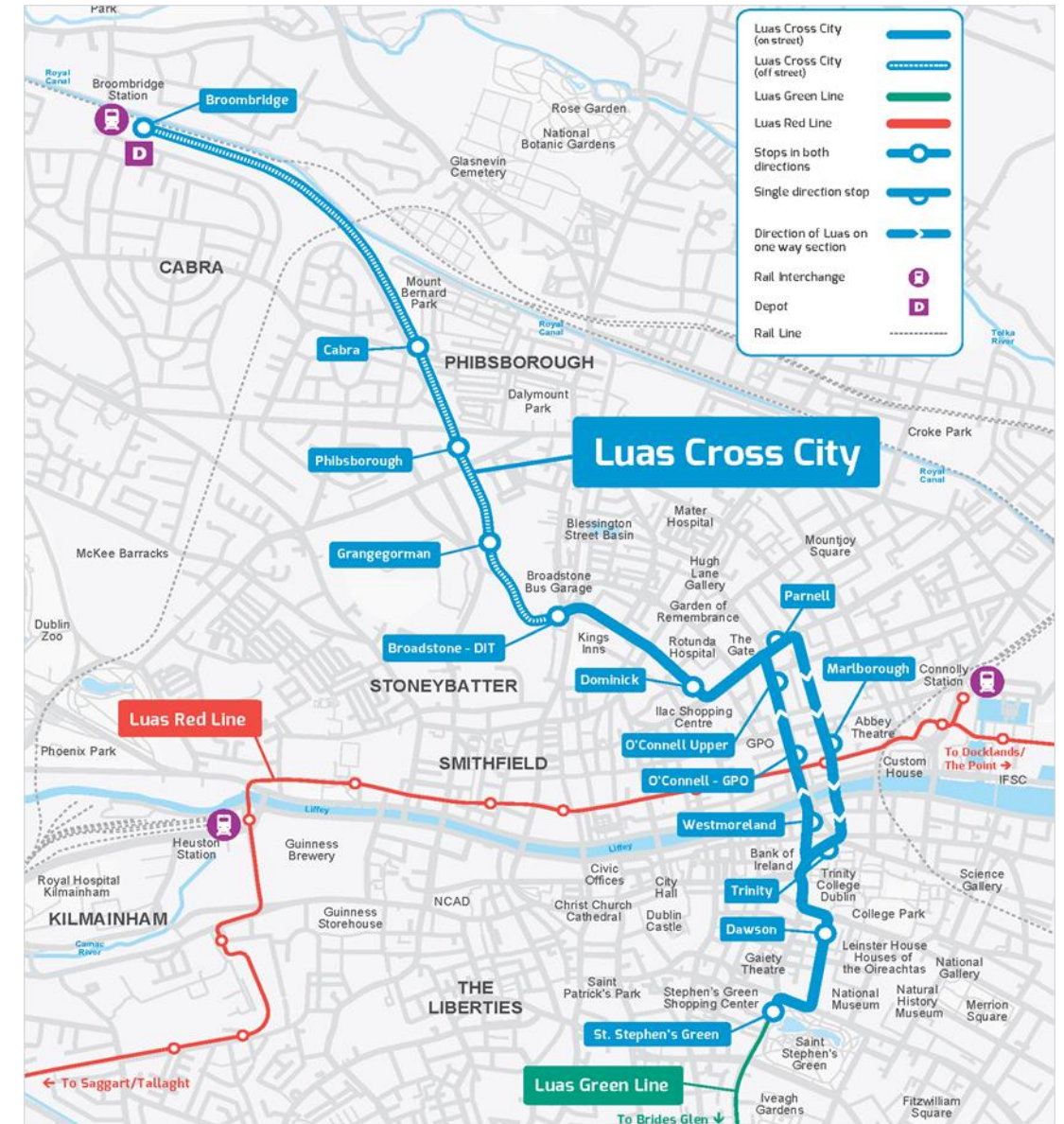
DUBLIN LIGHT RAIL NETWORK 2035

The Transport Strategy for the Greater Dublin Area sets out a light rail network which, looks like this.

TII is fully supportive of and is looking forward to delivering it.



LUAS CROSS CITY



NEW METRO NORTH

Construction: 2021 - 2026

Start Operation: 2027

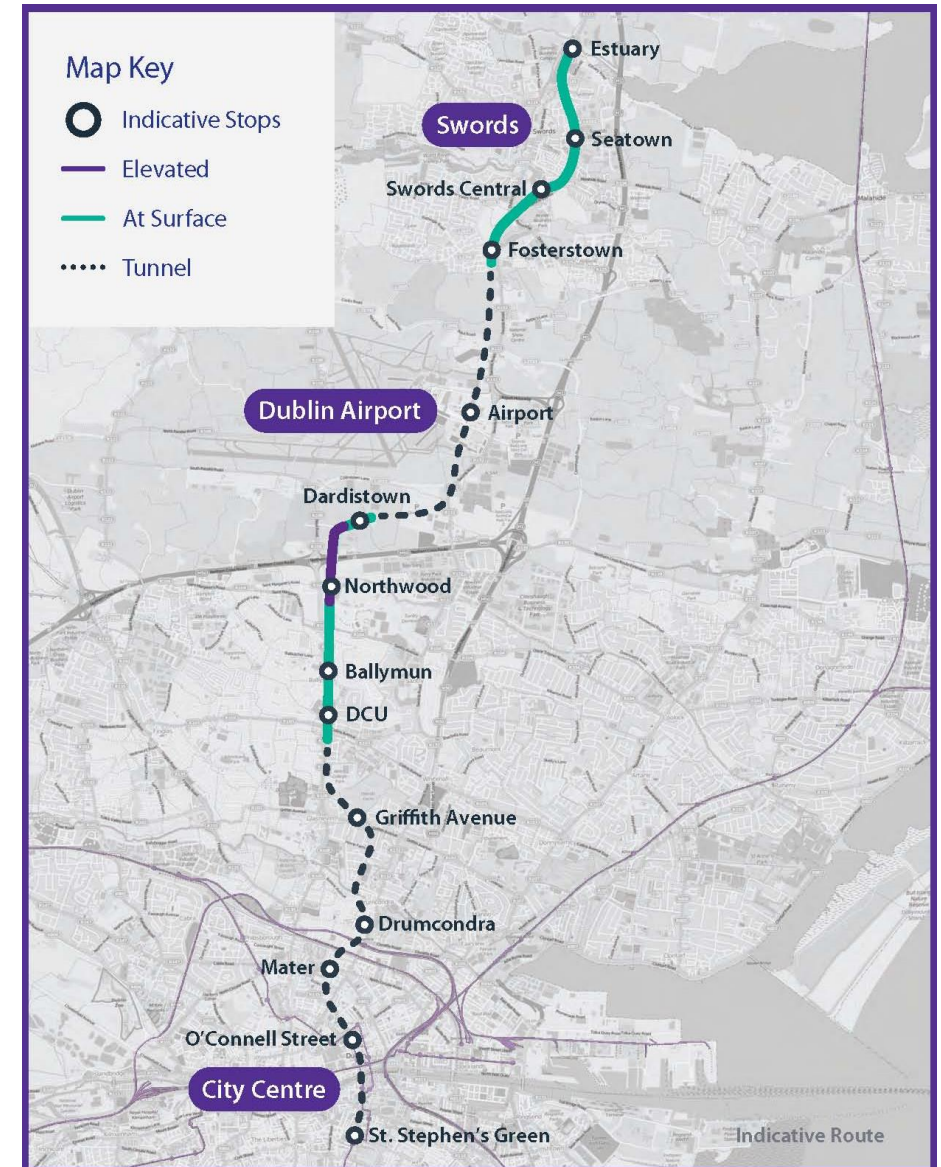
16km light rail link

City Centre -Dublin Airport -Swords.

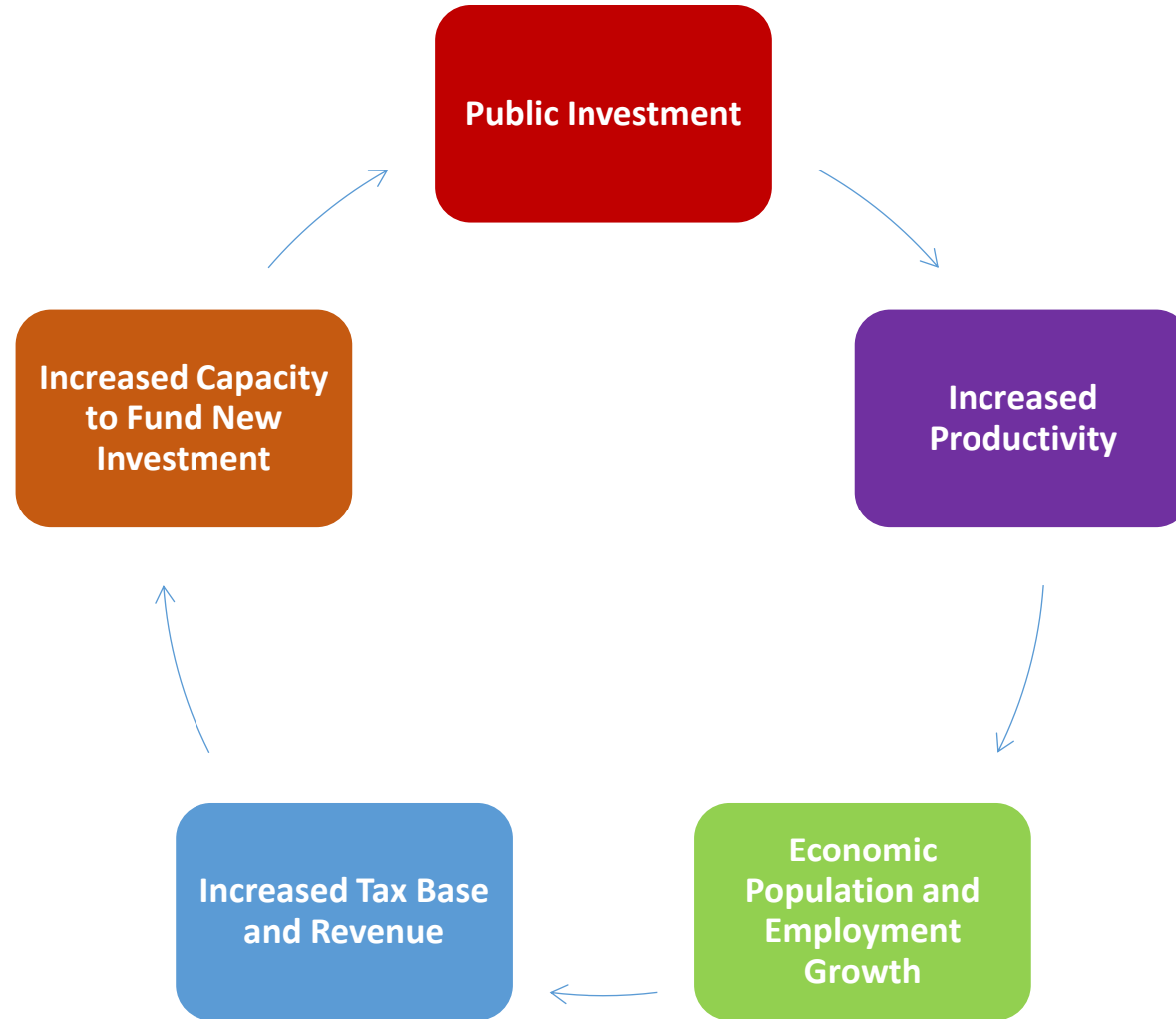
- *high frequency*
- *high speed*
- *high capacity*

Modified version original Metro North

- *less tunnelling*
- *fewer stations*
- *smaller stations*



TRANSPORT INFRASTRUCTURE WORKS



Reference : Spoher et al 2012 from SFILT
